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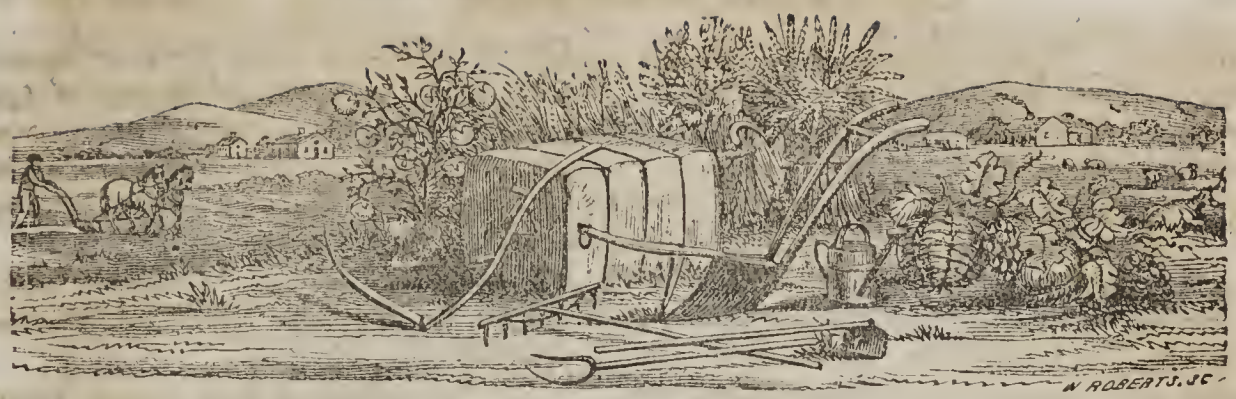

THE FARMER AND PLANTER.

Devoted to Agriculture, Horticulture, Domestic and Rural Economy.

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Having, in a former number, promised our readers Col. R. F. W. Alston's Essay on Sea Coast Crops, read before the Agricultural Association of planting States, on occasion of the Annual meeting held at Columbia, December 3rd, 1853 We shall in our present number commence with the introduction only, and in future numbers continue until the conclusion. This introduction we consider quite opportune at this time, as forcibly advocating an important object we have in view, that of getting up an Agricultural Convention, to be held in Columbia, in July next, as suggested by our worthy and able correspondent, J. M. P. on another page of this number.—ED. F. & P.

Address.

It is good for us to be here—discussing, not "the affairs of the Nation," but the elements of a Nation's wealth. The education, the agriculture, the commerce of the planting States. Citizens of the several States meet in this Association to compare notes, with the mutual desire to understand the peculiar views of each, to profit by each others experience, communicating freely their own—to improve the art, and direct attention to the Science of Agriculture.

It is to be hoped that one (not the least) of the good results of these meetings will be the institution of an Agricultural and Geological Survey, in each State, by the Legislature thereof, or at least the organization of a Board of Agriculture, through the members of which, analyses of soils may be procured by farmers, together with the dissemination of all sorts of information relating to soils, manures, implements and culture—varieties of stock and their treatment, the reclaiming of wild lands, and the administration of labor.

To a country populated as is ours, a thorough Agricultnral Survey is replete with use and

advantage. It serves to discover the best systems of culture and of management perfected by gifted individuals who may have devoted a lifetime to their establishment, to analyse, describe, and communicate them to distant parts of the State, where, possibly, they may be entirely new, and, if applicable, greatly beneficial.

The Surveyor makes it his business to ascertain the diseases of plants and animals, and unites with his own the experience and the science of all farmers in discussing the remedies applicable to them.

In this, and in various other ways, the Agricultural Survey tends to make farmers, in all parts of the State, somewhat acquainted with each other, as well as with their different practices and facilities, their difficulties and remedies.

The State of North Carolina has ordered an Agricultural Survey, and has entrusted its execution to the experienced Dr. Emmons, who was an agent in the elaborate work in the State of New York. He has already published a small preliminary volume as preface to his valuable labors in our sister State. In connection also, with the University of North Carolina, at Chapel Hill, a School of Science has been established, with a Professor (C. Phillips) of Civil Engineering, and a Professor (Hedrick) of Agricultural Chemistry, who, besides lecturing on that subject has made some interesting and valuable analyses of soil.

The Agricultural and Geological Survey of South Carolina is little more than fairly begun. The benefits which have been and will be derived from what has been done, cannot fully be estimated in terms. If they could be calculated and set down, in money, I suppose the result would be a sum sufficient to defray an hundred times over, all the expense which has been incurred for it by the State. The bringing to view and marking the local extent of the marl beds on the rivers Pee Dee, Waccamaw, Santee, Cooper, Ashley and Savannah, on Edisto Island, and elsewhere on the seaboard. The testing of the constituent value of these marls by the long practised formulæ and ample experience of the venerable Ruffin, together with his clear explanation of and rules for the use of them, are a boon to the inhabitants of the respective localities, and to the productive wealth of the State, which no one will pretend to estimate in numbers.*

For the institution of the Board of Agriculture, by which was organized the plan of Agricultural Surveys in England, the people of that country are indebted to the wisdom and public spirit of Sir John Sinclair, the friend and correspondent of Washington.

May not this Association constitute such a Board for the Southern States, for wise and useful ends?

Of all descriptions of men, whose energies are actively employed in the same vocation, planters are the least given to act together in combination. A main reason for this may be found in the fact of their living segregated in the country, although sociably inclined, associating kindly, and proverbially hospitable.

Each, independent of all persons save the indwellers and laborers of the plantation, practising there his own peculiar system, is separated from his surrounding neighbors by the recognized boundary of his broad acres. Deluded thus into a dangerous self-dependence, habitually secluded from the active bustle of life, and the frequent haunts of men, the worthy planter too often fails of exercising his share of that influence which helps to form public opinion. Not so the gifted citizen who mingles daily with the animated masses congregated in cities, or associates constantly with men engaged alike with him, in commerce, manufactures, trades or professional pursuits. If combining seldom, however, and only under the pressure of high excitement, or of threatened danger to a common interest—and if less commonly exercising individual influence—it is consoling to reflect that, whenever it may be called into active exercise, the influence of the educated planter is a sound and wholesome one.

Generally, he is conservative. Bred in the country amid the exuberance of nature, in her just proportions and distribution, his mind is accustomed to her gradual processes, the regular succession of the seasons, and the annual recurrence of the routine of labor allotted by the Creator. His gifts acquire strength, character and virtue. They may never be developed beyond his rustic sphere—never until fair occasion offer. But, when so called forth, they will be exercised for the most part conservatively,

*In his report, (1843, p. 82,) Mr. Ruffin says: "The small use of the plow, (indeed its total disuse in many cases,) and its substitution by the hoe and hand labor, is, to a stranger the most remarkably and novel feature of the agriculture of the lower Districts." This could not have been said of the Rice growing region of the lower Districts, but of the long-staple Cotton region. Even there the entire disuse of the plow is becoming somewhat more rare. Several planters, even on Edisto Island, are using the plow in the culture of Cotton as well as Corn; and its use is becoming general elsewhere.

and on the side of truth. In the creation around him, even of inanimate nature,

"He finds tongues in trees, books in running brooks, Sermons in stones, and good in everything."

(TO BE CONTINUED.)

Rotation of Crops.

As one means of arresting the gradual though certain exhaustion to utter stirility of our cultivable lands South, we, in our January number, recommended to the readers of the Farmer and Planter, a system of rotation or course of crops, according to the circumstances in which we may be placed, of climate, soil, peculiar products and market. Below will be found a most interesting article on the subject of Rotation, &c., taken from the Farmers Register, vol. 7, p. 609; from the able pen of our old friend, Col. E. Ruffin, who gives us light from its first dawning, up to that of almost a full noon-days sun. What he has not quite reached in this article, we will endeavor to supply from other communications in the same valuable work. The Virginia scheme of rotation or course of crops, as will be seen by our readers, does not embrace cotton, but includes a greater proportion of wheat than is or should be cultivated further South. Hence any scheme we may devise must either exclude the former (cotton) from the course, giving it a separate field if cultivated at all; or it must occupy its place in the rotation to the exclusion of one of the other crops, or by adding another field. In case of the cow pea taking the place of clover, which we conclude should be to course on our much exhausted land; then cotton might come in after corn, so as to alternate fibrous and tap rooted plants. Even with the *four-shift* rotation which is not perfection in the Virginia scheme, as will be seen in our future extracts. The course might run: 1, corn; 2, cotton; 3, wheat and oats; (the oats to be sown on that part of the field last picked out,) 4, cow pea, to be given to the land and hogs only, except seed for another crop. To this by adding another field, making a *five-shift*, we might say 5 rest to be plowed in the fall for corn to again commence the course. But these are only hints or suggestion to our readers to set them to thinking, and as we hope, to draw them out.—ED. F. & P.

There is scarcely any condition of agriculture, in the least degree advanced, or improved in operation, which is not based on some rude system of rotation, or succession of crops in a certain order. It has long been known, and almost universally acted upon, that, as to grain crops at least, the same kind could not be produced successively on the same land without a rapid decline of product, from some other cause or causes besides the mere lessening of the fertility of the land. For when land so treated, and so reduced in product, was put under some other crop, the product of such other crop was greatly better. Therefore, except in the earliest and rudest cultivation of a new country, no where is there to be found cultivated the same grain crop, for many years in succession, without the interposition of some other crop, of other grain or of grass. Cotton is the only tilled large crop in this country which has not been alternated with other cultivation, and which is tended for years together on the same land. This practice is recommended by the clean condition of the land required by that crop, and which its repeated culture secures. But it may well be doubted whether the diseases and enormous losses of product in this crop, are not to be ascribed to its being continued so long on the same land.

But though every farmer uses something of a rotation, still the most usual courses of crops are very imperfect and highly objectionable; and there is scarcely any scheme of rotation which does not offend greatly, in some of its features, against the correct principles or theory of rotation.

The fact of the certain and rapid decline of product of any one crop repeated year after year on the same land, was universally conceded, and the practice generally abandoned, by practical cultivators, without their troubling themselves to investigate the causes. Theoretical and scientific agriculturists have entertained different views at different times, and each has had its reign. Formerly, it was supposed and generally admitted, that each plant drew from the soil some food peculiar to itself, and thus rapidly exhausted the soil of this its own peculiar nutriment, while there still remained unconsumed, and in abundance, the food to support plants of other kinds. But though this theory passed current long, without dispute, because it served to explain the effects produced, it was gradually weakened, and finally overthrown, by later and more correct views of the nature of the food of plants. It is but within the last few years that a new and opposite doctrine has been started, which is at least the most *in fashion* at present, if not the most generally received. This is founded on the discoveries of Macaire, De Candolle, and Towns, of the *excretions* of plants by their roots; and the inference thence drawn, that the rejected excrement is fit to serve as food for other plants, but is useless, if not absolutely hurtful, to the kind from which it was thrown off. And hence also would follow the necessity for a change of crops.

Without denying or advocating either of these doctrines, I will yet add to whatever may be the main cause which calls for a frequent change of crops, *another cause*, of at least very considerable operation, and which has been already named in the first of these numbers. This is, that every plant is subject to be preyed on by its own peculiar tribes of insects, which are continued to be supplied by their proper food, and favored by the still continuing circumstances of the field, and therefore are increased continually in numbers, and in their destructive ravages, so long as the crop which fed them, and the circumstances which favored them, remain unchanged; and that these insects must be destroyed, or greatly reduced in their numbers and powers of mischief, by a total change of the growth, and of the treatment and condition of the field. Perhaps these depredators may be invisible, from their minute

sizes, and yet so numerous as to cause any extent of injury that is found to be suffered by unchanged tillage of any one crop, and which is avoided by convertible husbandry, or a rotation of crops.

But luckily, though the causes of such evils may be uncertain, the effects and the remedies are not therefore unknown. And the observations of both scientific and practical agriculturists have served to establish what have been termed the *principles of the succession of crops*, which furnish a body of rules by which to test every particular scheme, and show its advantages and defects. But though most of these principles and the rules founded on them are universally received, still perhaps every writer and reasoner upon rotations differs in some important respects from all others; and my own views, and still more the rules and applications founded thereon, which have been and will be offered in these numbers, have no authority, either in previous precepts, or examples of practice. The adoption of the above named and new reason for a rotation of crops, would alone require the introduction of new rules in determining a proper order of succession, and a considerable departure from the stated rules prescribed by any previous writer on this subject. But though the principles and rules laid down by every modern and well informed agriculturist may have differed in some respect from all others, and even if all were wrong as to the main *cause* of the necessity of changing crops, still all were right, in the main, in their general precepts and rules of ordinary procedure.

But though many scientific writers have laid down the principles of proper successions of crops, and all modern agriculturists in writing, or in practice, have advocated particular rotations, still scarcely any two agree fully in their rules; and agreement in practice seems more the result of old custom, and neighborhood example, than of thinking and reasoning. It is manifest that no particular course of crops can be prescribed as the best for an extensive agricultural region, nor even for the fields of different soil on the same farm, nor for the different conditions, at different times, of even the same field. It is as much quackery to direct the same rotation for an extensive region, as it is to prescribe the same medicine for all diseases. When we hear of a particular rotation (no matter what,) being generally pursued throughout a large district, it is pretty good evidence that the rule is pursued from custom, and not by reason. Some of our best farmers have no regular rotation, though always aiming to observe the sound principles of the succession of crops, by varying the succession according to the changes of circumstances.

But if neither reasoning nor precept can point out always a right or perfect rotation, it is easy enough to learn from both what is wrong and injurious. And we can scarcely find any regular rotation in this country, which does not offend against some admitted principle and rule, and the most common have scarcely one redeeming quality, no matter by what test, or principles, the practice be tried.

The most important, and indeed *indispensable requisites* of any good scheme of rotation, or course of crops, I take to be the following; and the observance of them may be termed the *three primary rules for rotations*. 1st. That the several crops which form the course, are among the most *profitable to the cultivator*, in the circumstances in which he is placed, of climate, soil and market. 2nd. That the whole course of crops, taken through, is *profitable to the land*—serving to increase its productiveness, if poor—and at least retaining its productiveness, if already rich. 3rd. That each crop in the rotation *serves to prepare for and aid the cultivation and production of the next* which is to follow it, instead of obstructing either, or both.

The two first of these requisites, either expressly or by implication, may be considered as embraced in every theoretical scheme of rotation, and aimed (however ineffectually) to be preserved in every judicious farmer's practice. The third is almost disregarded by all, and is certainly not by any placed in the important position, or viewed in the light, which I think it deserves.

If all these three requisites be secured, any rotation will be good; if either be neglected, or be but imperfectly secured, the rotation will certainly be a bad one. The best devised rotation for the improvement of the land and its products, and perfecting the tillage, would be admissible, if any of the crops were of such kind as not to be either sold, consumed, or otherwise profitably used, by the farmer. Neither would the greatest annual sales justify another rotation, if it worked to impoverish the farm. And even if the *kind* of crops were to be the most profitable, and the improvement of fertility regularly advancing, what will it profit the proprietor, if the rotation operates to produce weeds and depredating insects in such numbers as greatly to increase his labors, and also to diminish their products?

Scientific agriculturists have laid down so many principles, or rules, to be observed in planning rotations, that it is impossible in practice to observe all, or perhaps half of them. Thus the English writers insist, perhaps more strongly than on any other point, that green (or grass and roots, or leguminous) crops, and white (or grain) crops, should regularly be alternated. Others, that tap rooted plants should alternate with fibrous and shallow rooted. But all these are minor considerations compared to the foregoing; and each or all of them might come in conflict, in the circumstances of this country, with one or more of the more important and indispensable requisites.

The first rule which I have above stated, that the crops should be among the most profitable to the cultivator, is almost the only one which directs the farmers of this country; and yet even that object would seem to be lost sight of, in the miserable and futile means used to reach it. The nature of the soil and its absolute unfitness for other crops, had generally caused the selection of some one or more suitable crops for each agricultural region; and when once thus forced upon the cultivators, the custom of the place has made this course of cropping general, if not universal, through that

region, though numerous exceptions, even if the general rule were good, would be demanded by differences of soil, or of other circumstances. Thus, Indian corn is the great crop of lower and middle Virginia, followed by wheat in the upper and richer part, or by oats where the soil is quite too poor or too sandy for wheat. A young farmer, who commences operations without any consideration of the wants of his soil, or of the market, adopts the usual crops of his neighborhood. If wheat be the small grain generally raised, he sows it even on his most sandy and his wettest arable lands. His corn-culture is as large as his land and his labor permit, and is pursued without change, even though some years the market price may be (as it has been in lower Virginia) less than 25 cents the bushel. Yet during this time, and every year, Irish potatoes, brought from New England, are selling in all our towns, (and bought too by many of the farmers,) at $1 the bushel; and thus the product of 20 acres in corn, or in wheat, is exchanged for that of half an acre in potatoes. Yet we can make, in lower Virginia, as good potatoes (I have often seen better,) than any brought from the north. By a still more unaccountable improvidence and absence of all calculation, hay-making is totally neglected, even on the rich and wet low-grounds of the Roanoke; and where the soil is the most admirably suited for grass, it is regularly and most laboriously ploughed and tilled, to produce bad and very precarious crops of grain. And, to come to smaller and more frequent departures from this rule, we may see on almost every farm which has various soils, the most intractable clays put in corn, which requires a sandy soil—wheat on sands—the steepest lands and most liable to be washed, subjected to the plough, and also the wettest spots, even though their laborious tillage may obtain scarcely any product of grain. The observance of these neglected minor points (and yet very important to profit,) would alone produce a great reformation in our farming.

The second requisite, (that the course of cropping should permit the improvement of the land,) is aimed to be secured by but a small proportion of our cultivators; and the third rule by still fewer.

Under peculiar circumstances, either one of these requisites may be so increased in importance, that the others may be, and ought to be, for profit, comparatively neglected. Or the object of either may be made so easy by peculiar circumstances, and by the use of means not belonging to the farm, that the otherwise necessary security of that object, from the rotation, may be neglected. Thus, where the neighborhood of a town offers to a farmer regular demand and high prices for roots and hay, and dairy products, it would be foolish for him to make grain or tobacco his most important crops, which others, at ten times his distance from market, could produce even more cheaply. And with the means of purchasing town manures, he would wisely adopt what would otherwise be a too severe and exhausting rotation of crops.

I shall now proceed to subject to the test of the three rules which have been laid down, the most common rotations of eastern Virginia, as well as some other schemes which may not yet have been tried sufficiently, if at all, in practice, but which seem better adapted for profitable, easy, and enriching cultivation.

The first and most humble attempt at a rotation in this country, and the one which formerly was general on the greater part of most farms, and is even now in extensive use, is the *two-shift*; which, however, short as it is, had various grades of bad quality. This usually followed the *continual* cultivation of the land, in its newer condition, in tobacco, while rich enough for the crop, and afterwards in corn, every year.

The two-shift was most usually this:

1st year, corn.

2nd year, wheat—or oats, if on land too light or too poor for wheat—after harvest, grazed closely until next spring, when ploughed for corn again. When too poor to bear any small grain crops, that part of the course was omitted on such poorer spots of the field, and afterwards on all—thus changing the rotation to

1st year, corn.

2nd, natural cover of weeds, grazed.

When not grazed the second year, as was sometimes the case, for want of separate fencing, or some other cause, this rotation made nearer approach to alternate and improving husbandry. It was then

1st year, corn.

2nd year, weeds not grazed, and which (if not burnt off, as was done most usually,) formed a very poor *manuring* crop.

The celebrated Eastern Shore rotation, is of two-shifts or fields, but of three crops, in the two years. This is

1st year, corn.

2nd year, first crop, oats—secondary crop, Magothy bay bean—a spontaneous and close cover immediately succeeding the oats, and which remains mostly or entirely untouched by the grazing stock, and is ploughed under for the next crop of corn. The interposition, by nature, and not by the design or industry of the cultivators, of this leguminous and manuring crop, is a most valuable feature in a rotation which otherwise would be altogether exhausting and destructive. The moisture of the air, no less than the sandiness of the soil, and the cleanness from other plants, give vigor to this bean, and make one-third of the whole course meliorating, to two-thirds of exhausting crops. The same moisture also nourishes the oats, and prevents that crop exhausting so much, as in dryer regions—and also by its greater bulk of straw, furnishing more materials for manure. These circumstances render this rotation, severe and barbarous as it is, less exhausting (or more improving, if much attention is paid to manuring,) than the ordinary three-shift rotation. Except in the chance-made addition of the spontaneous bean crop, this rotation offends against every principle and rule which ought to govern.

The *three-shift* rotation was the next step in the supposed march of agricultural improvement, and even yet is that which many remaining two-shift or no-shift cultivators aspire

to reach, as the limit of their farming and improving ambition, and their *ne plus ultra* of mild cultivation. This was

1st year, corn.

2nd year, wheat, and afterwards the spontaneous grass and weeds grazed.

3rd year, pasture, closely grazed.

The severity of the second year was generally moderated on the poorer parts, by the wheat being there necessarily omitted—which of course gave to those parts two years rest from tillage, in three; and, while the wheat was growing, a cessation from grazing also. With very few exceptions, such was the general system of the best cultivated farms in lower Virginia, when Taylor wrote; and it is on this kind of three-shift rotation that his denunciations were so deservedly cast. This rotation violates every sound principle and rule, and certainly deserves to be treated without mercy; but many have continued to denounce the three-shift rotation even when rendered comparatively mild, as if the evil was in the *number three*, and not in circumstances more important than the mere number of shifts.

But taken in the aspect above described, and which was the best then that was exhibited, the three-shift rotation had no merit whatever. It had no other than fibrous rooted plants; no other than narrow-leaved crops; no root, leguminous, or even grass crop—for the close grazing merely served to prevent the scanty weeds and grass from growing; and while every year's crop was exhausting, the system furnished but small resources and materials for manure. For the grazing animals were as many as the land could keep alive, and scarcely any were fattened (by grazing alone,) for home consumption or market—and their support served to diminish, instead of adding to, the fattening or manuring of the land. At that time it would have been difficult for a reading farmer to *comprehend* this undoubtedly sound maxim of English writers, "the more cattle kept, the more grain or other crops produced." But the English farmer *keeps* no animal except for the profit it will yield; and all that are so kept, give their rich and abundant products of manure, as an additional profit to the soil. But when a stock of cattle, sheep, and hogs can barely make out to keep alive through the year, and never fatten, except by stall and grain feeding, then keeping them certainly yields no clear profit to their owner, and their close grazing of the fields takes away more of fertilizing materials, than their dung can possible replace. An English or French farmer would be no less at a loss to comprehend the object (or even to believe in such a general practice,) of keeping a large stock of animals from which no net profit was obtained, or even hoped for; and he would justly think that it would not be more absurd for a farmer to tend a crop of grain, and then leave it to rot on the field, than to give all his grass through summer to animals, and then lose the flesh so acquired, by starvation through the winter. Indeed, the general cattle management of this country would scarcely be believed in any good grazing or farming region. On the farms under the usual three-shift rotation, say of 400 acres of arable land, there would be from 40 to 60 head of grazing cattle, which furnished annually to the owner, at most, about as much milk and butter as two well kept cows might supply—one or two passable beeves, with the aid of grain feeding, a few poor calves for veal—and a pretty large supply of *hides* from deaths by starvation in the spring. There were hogs enough to furnish the year's supply of bacon; but only by means of grain feeding, which alone was admitted to cost nearly or quite as much as the market price of the meat. A flock of poor sheep were on some farms also, of which, before shearing time, half the wool of many was hanging on the briers, and the remaining fleeces filled with burs. This sort of grazing system accompanied the old three-shift rotation; and inveterate as were old habits, and patient as we are of long-borne grievances, this evil was so great, that none could deny but that the mere expense of the dividing fences, necessary to keep the cattle from the fields of grain, cost more than all the returns from the grazing animals.

The *four-shift* rotation, recommended and practiced by Col. Taylor, was—

1st year, corn.

2nd year, wheat, and clover sown—or, if too poor for wheat, left at rest, and not grazed.

3rd year, clover, (or weeds) not mown or grazed.

4th year, clover, not mown or grazed.

This rotation, as before stated, was the first introduction of manuring fields by their own vegetable cover, and this practice, and the admission of the opinions on which the new practice was founded, was a prodigious step towards agricultural improvement. It is true that even this rotation is opposed to the rules of good husbandry in most respects. But the giving of two and a half years out of four for vegetables to grow, that were to die and decay on, and be finally ploughed into the land, was a feature that compensated for every fault, and made the rotation decidedly meliorating, if on land capable of being enriched by the mere application of vegetable matters.

In the first of these numbers,* it was stated incidentally to other matters why this rotation became of less benefit and more objectionable, in proportion to the time, and to the effect with which it operated; and if it improved the productive power of any land, that it also greatly increased the labors of tillage, and the destruction of products, by increasing weeds and noxious insects. In consequence of this objection, very few disciples of the great introducer of and advocate for this rotation have continued long to pursue it strictly.

The *four-shift* and *clover fallow rotation* differs widely from that of Col. Taylor. This has been, and I believe still is pursued with great succes by Hill Carter, of Shirley, John A. Selden, of Westover,† and has been on some other

*Col. Ruffin had written too previous numbers for the Register, "on the manuring of arable lands by their own vegetable growth—Rotation of crops."—ED. F. & P.

†Since the writing of this article, the *four-field-shift*

of the best lands of James River, where it has since, in other hands, been either neglected or abandoned, for some modification of the three-shift rotation. This four-shift system is

1st year, corn.

2nd year, wheat, and clover sown, and not grazed.

3rd year, clover, not grazed, and ploughed in deeply in August and September, and the field sown in wheat.

4th year, wheat, to be followed by corn, in re-commencing the rotation next year.

A sufficient standing pasture was kept on other land. Mr. Carter, for a considerable length of time, substituted oats for corn in the first year.

The farmers above named, (whose accounts of their systems and their products were reported at length in vol. I., Far. Reg.,) and others also, undobtedly made great crops, and great improvement of land under this very severe rotation. But those results were due more to the excellence of their general management than to their rotation. None but admirable executive farmers can possibly overcome the great difficulties which accompany this rotation. He who, in our dry climate, on a stiff or even medium soil, can plough every August and September one-fourth of all his arable surface, to the depth of 8 or 10 inches, and turn in and cover effectually a heavy coat of clover—and this without failing in any year—shows thereby alone his ability to execute the most arduous undertakings, and to *do well* every thing which he may make a part of his general plan of operations. This rotation, in such hands as have directed it, has some admirable features; but it must be executed in the most perfect manner, or these best features are lost, and there will remain only the great evil of three fibrous-rooted, narrow-leaved, and exhausting grain crops, in succession.

The great merit of the four-shift rotation, in general, and considering it as embracing both of these very different varieties, is its easy adaption to more mild or more severe cultivation, without any different arrangement or number of fields. Thus Taylor's rotation may be rendered still milder (as is needed on the poorest lands,) by omitting the wheat crop; and as the land improves, the richer spots may be thrown under the more severe cultivation of the other four-shift system, as practised by Mr. Carter or Mr. Selden. But, in any form, the rotation still remains objectionable, for the succession of grain crops, (if there are even two in the course,) as well as for other things, in one or the other variety, which have been already stated.

Every rotation yet known in Virginia is more or less objectionable upon one or more of the following grounds:

The adoption of certain usual crops, without regard to the various qualities, and the wants of the soils or even to the demand of the market. Thus every farmer is sure to make corn and wheat (or oats,) his principal, if not his only crops. Thus the fields are deprived universally of the most important culture of roots, which dip into and draw from the soil deeply—and of pea-crops, which feed on the air, and give the product to the soil as manure—and of all annual green manure crops, which would cleanse the soil by their getting in, their growth, and ploughing under, as well as manure it; and the store cattle and hogs suffer, for the want of roots and other succulent food, and those which are necessarily well fed, consume grain almost exclusively. Besides these and other objections, which any good practical farmer, or sound theorist, would make, I would further object to the great defect of the preparatory crop not serving to destroy the weeds which will obstruct, and the insect which will prey on, the succeeding crop. Two great exceptions to this last general fault are presented when wheat follows clover, or tobacco, both of which are plants of the broad-leaved kind, unlike in all respects to the succeeding crop, and of such unlike conditions also, that it may be presumed that the growth of either has served well to destroy many of both the weeds and insect depredators, which are injurious to wheat. Accordingly, these two crops are the best forerunners of wheat; which after them always is an excellent crop for the land and the season.

Every well informed farmer will agree to the importance of there being more meliorating crops introduced in our rotations—more grass, peas, roots, and broad-leaved vine crops. But the objection always is to making crops for which there is no sale, or market demand. But suppose there is no direct sale and money profit made from hay or roots—they will yield as much profit by being used to feed and fatten (*not merely to keep alive,*) the necessary farm stock, and thus allow to be sold the corn and other grain which would be otherwise consumed by the animals, with less relish, and less benefit.

While roots are totally wanting in our rotations, one important office is left unfilled, that is, the deep-piercing of the soil and thorough opening of it by tap-rooted and tuberous rooted plants. Another thing wanting, is the ploughing under of pea or other annual green crops, to cleanse as well as to manure the soil. These properly introduced, and the grain crops separated by green crops, would produce rotations far more improving to the land than any yet known, and probably as much better for early annual income as for improvement of the land—the farmer's best capital.

It is greatly to be feared, however, that root culture on a large scale, forming a part of the general rotation of crops, cannot be profitably adopted in this country, owing, perhaps to the defect of our climate. Turnip culture was the great means of improving agriculture in England; and, as there united with sheep and cattle fattening, the turnip crop is the most enriching of the rotation. But here, turnips are considered among the most exhausting of cultivated crops; and besides, too uncertain in product.

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has been abandoned by both these gentlemen, and the *five-shift* substituted, and not only by them, but by other conspicuous agriculturists of the Old Dominion.—Ed. F. & P.

and of too little profit, to be admitted into a general or regular rotation of crops. But perhaps the experiment may not yet have been fully tried; and even if turnips are unsuitable, perhaps some other kind of roots more suited to a warm and dry climate, may serve the purposes of turnips.

We have in this country a class of crops which are not known in European rotations, or scarcely in agriculture, and which may come in admirably as part of a rotation, and serve the ends of all the three rules. These are annual vines, such as pumpkins, squashes, cimblings, and melons. These plants, though requiring rich soil, must by their broad leaves draw the most of their support from the air. By the early tillage which they require, and the thick and smothering cover which they afterwards afford, they serve to cleanse the land; and on this account, and also by the total change of kind, and of circumstances, they must be good precursors for the narrow leaved grain crops. But these are mere theoretical views, as these valuable crops have been heretofore cultivated almost as sparingly, and with as little attention to their cost and profits, as has been done in Virginia in regard to root crops. E. R.

For the Farmer and Planter.

Circular Saws.

Mr. Editor:—The brief essay I now have to offer you, in conformity with a promise long since made, has remained in embryo for several months; but as the public could derive no benefit from a knowledge of the cause, time need not be wasted with unnecessary apology for its delay.

In discussing the subject under review, I bring to my aid, fifteen years experience in cutting lumber, and a general knowledge of the various kinds of mills, as well as many of the wheels now in use, without the slighest personal interest in doing *other* than justice to their respective merits, so far as I may attempt to treat of them.

If quantity or quality of lumber to be produced be a desideratum, then a fifty-two inch circular saw, or one about that size, is the very thing, surpassing any other, to accomplish the object. If properly put up and rightly managed, it will cut more than two verticle or crank saws, worked after the most approved manner; it matters not whether they be propelled by the modern reaction, or the old fashioned flutter wheels, under high heads of water, and driven to their utmost capacity. It is better adapted than any other for cutting all kinds of ordinary sized timber—except, perhaps, ranging timber, in which case a gang of verticle saws, to make a clear finish of the stick at a single through, may be prefferable. But this is a question not yet settled fully to my satisfaction. It is true, a circular saw does not cut seasoned timber with the same facility that it does green; but I have not yet found any thing in the shape, or of the texture of timber, that it will not cut with apparent ease. Oak and hickory yield to it nearly as readily as the harder kind of yellow pine; and the knots in the upper cuts of the latter, never retard its progress, or cause it to diverge from a true line, like they do the verticle saw. The upper cuts universally work up easier than the lower ones. The circular runs with such velocity that it has not the time or the inclination to fly the track, for a knot, like the verticle saw, which too often adopts the false rule of making "the furthest way round the nearest way through."

I have recommended a fifty-two inch saw as a maximum size to begin with, but a smaller one will do. The one I am now running was originally fifty-two inches, but has worn down to about forty-six; and yet, we encounter very little difficulty in reducing the largest trees into any kind of building material—either scantlings, boards or laths, of any required dimension. If it does not cut through the first time, a little help with an ax will bring off the first slab; then the log must be turned, the face down, and in like manner a slab and plank may be taken off of the next side; this being done, turn down the last made face, and in like manner a slab and two planks may be taken off; then, again, turn down the last made face, as before, and continue the process of taking off until the timber is so reduced that the saw will cut entirely through it. After the log is worked up, the rough-edge plank may be put on the head blocks and converted into square-edged boards, as wide as their faces will allow, or they may be run into laths. To one unacquainted with the process just mentioned, much difficulty may be found, but it will not be verified in practice. There need be very little waste of timber, as the saw is capable of reducing nearly all of it into some useful material.

Common sized timber is managed differently. The best plan is to take the first slab off of the side bowing outwards, and the next opposite to it. Then turn down and saw into the required thickness. If the bottom face should not be large enough to keep on the head blocks until the log is worked up, as is often the case, when necessary, turn it over to finish the last line or lines, as the case may require.

One of these large circulars will not only do double the work of a verticle or crank saw, but do it better, and with a less expenditure of water—if water be used, and rightly applied, as the

propelling power. The same may be said of steam, or any other motive. This assertion is sustained by theory and verified by practice.

The circular has an onward motion, nothing retarding it but the resistance of the wood it has to sever. The teeth are so shaped as to *cut* and not *tare* their way, like those of a verticle saw. The latter, being worked by a crank, has to reverse its motion—comes under the law of action and reaction, every stroke it makes; its teeth must break instead of cut the wood they have to remove. The sash, the carriage, the crank, bound down as it must be, all encounter much friction; while every part of a circular mill can be put in motion by the strength of a man. Hence, in the one there is little, while in the other there is great friction, and consequently loss of power. These are some of the reasons to be advanced, illustrative of the superiority of the one over the other. More might be advanced on the subject, but as it is not my purpose to theorise, I will proceed to give facts.

In 1852, I substituted a circular for a verticle saw. Since then, we have doubled our previous operations. The crank saw required steady driving, throughout the day, and often part of the night, to make an average of 2000 feet of sqare-edged boards; but now, the circular, moderately worked, produces 4000 feet, of a superior article. It is capable of turning out much more, but I have used such figures as we endeavor to work up to. They may look large to a man that knows nothing of the powers of such a mill; but to some others, well acquainted with the operations of circular saws, I am sure they will look small. Be it so; yet, many will be ready to acquiese in the opinion that it is pretty fair work—especially in hard pine. I have never made the attempt to see how much we could cut in a day. But many a log, 20 feet long, squared to 12 or 14 inches, have I seen run into plank, at the rate of less than a minute per line, including running back and setting.

Two men and two small boys are required to attend to it. They draw in the logs, saw and put the lumber out of the mill. Another does the stacking away, (so as to be made up afterwards into rafts, and sent down the Edesto, to the Charleston market. The operatives are all negroes—trained by myself. With the aid of a little supervisory direction, from me, they keep the mill in good condition; and since we have been running the present *one*, I have had much less trouble, to keep all right, than I formerly had to keep the *other* in working order. Hence, the change has been to me not only advantagious pecuniarily considered; but it has also relieved me of a great draft upon my time, by requiring less of my attention.

The power I use is water, applied to a breast wheel; 12 feet in diameter, and 10 feet long; the maximum head, including fall, is about 12 feet; the head above the apperture is nearly four feet; the area of apperture is 350 square inches; it is divided in the middle so as to allow of two gates; the wheel is also divided by a middle rim, giving greater strength to it, and each side receives the water from its corresponding gate or shute. The water is let on the wheel by two hand levers, easily worked. The man that controls them, also manages the levers giving direction to the carriage. He opens one gate, letting half the water on the wheel, by the application of his hand to the lever; the saw starts, then, with his foot, he presses down another lever, whereby the carriage is put in motion, and it brings the timber in contact with the saw; the other gate is then opened, in like manner as the first, giving the saw its maximum power; the timber is speedily severed, and then, as the saw clears itself of the labor, the first gate is closed; the motion of the carriage is reversed, by the application of the foot and the hand of the man to *the* two levers under their respective control; in this way, the carriage is run back, the other gate being closed in the meantime, and all done by the same man. Thus the whole of the water is shut off, during the 5 or 6 seconds required to run back and arrange the timber for the next line. This process is repeated, for each line cut. consequently, there is no unnecessary waste of water, or unnecessary wear and tear of machinery, the saw though continuing to run, does so from its previously acquired momentum. It is geered to make about 900 revolutions per minute, under full speed, out of timber.

On one side of the water wheel, to a strong wooden rim, 7 inches thick, are firmly secured 10 cast iron segments, constituting a driving wheel, with 140 cogs. This works into a cast iron bevel pinion, with 34 cogs; it being fastened on a wooden shaft, working vertically, and extending to the upper story of the house. On the upper end of the shaft is a cast iron bevel cog wheel, with 70 cogs, driving a pinion of 28 cogs, on an iron shaft, of 5 inches diameter, working horizontally; and on this latter shaft are cast iron arms, (called a spider,) to which is affixed a wooden drum, 7 feet in diameter, which, with the aid of a leather belt, 13 inches

wide, and about 36 feet long, the saw is driven. The drum on the saw shaft is of 2 feet diameter; and these several pieces of geering give a very satisfactory motion and power to the saw.

The gudgeons to the water wheel ought to be of about 6 inches diameter, and run on wooden boxes set so as the work to be against the end of the wood. The upper gudgeon of the vertical shaft should be 3 inches in diameter, and also worked against wood. It will be found to answer as well as any thing else, for the parts just named; but the lower end of the vertical shaft should have a socket gudgeon, in which to affix a toe of caststeel, of 2 inches diameter, and it should be run in a composition step, of hard, anti-friction material. Copper, zinc, tin and lead form a good compound—the first being about 10 to 1 of either of the others. I am not certain that I am giving the best proportions—perhaps I have over stated the latter two, but I cannot refer to proper authority just now. The step should be two or three inches deep, so as to resist the lateral pressure of the gearing, which, at this point, is very great. It will only require a few pounds of the composition, for when prepared it should be set in a cast iron saddle and leaded fast. The boxes for the iron shaft had better be of babbet mettal. I have found these several materials to answer better for the places I have assigned to each, than any thing I have tried. Upon the lower cogs I use water, and on the upper ones tar and grease; which I have found to be the next best lubricator. I prefer wide faced cogs —some of mine are 5, and others 6½ inches—the latter width I think most economical in the end, if not in the beginning.

The mill with all the machinery I have in use, I had made to my own order, in Baltimore; and although prices *then*, may not be the same *now*, yet, they may serve as data from which to estimate the cost. But iron was lower then than now, and the heavy castings cost me only 3 cents per lb.

The mill, with 28 feet carriage, 56 feet ways, 52 inch saw, boxing, packing and shipping, cost	$398.00
Castings and machinery for driving it, cost	160.00
36 feet belting, at 80 cents per foot, cost	28.80
	$586.80
Freight and incidental expenses (say about)	13.20
Total cost, delivered in Charleston, So. Ca.,	$600 00

The mill was made by Messrs. George Page & Co., whom I have found very gentlemanly in their dealings, as well as skilled in their profession as machinests. They also manufacture Engines, and likewise horse-powers for working their mills.

But there is no longer any necessity for going so far from home to be supplied with all the machinery required to work a circular saw. There are establishments in Augusta, Georgia, and Columbia, in our own State, where such mills are now manufactured. Recently, Messrs. Glaze & Co., of the Palmetto Armory, having completed their large contract of arms for the State, have turned part of their attention to the building of Engines, circular saw mills, &c., and if we are to judge their claims to public patronage from their past success in all that they have heretofore undertaken, we may assign to them a bright future, as well as greater distinction in this newly chosen field for the exercise of their great mechanical talents.

Beleiving, Mr. Editor, that I have already written as much as you can afford to *press* in a single number of your useful journal, I must defer what I would say of *other* modes of running a mill, of keeping the saw in order, and of many simple, yet useful matters relating thereto, for some more suitable period, if you should think it of sufficient interest for me to resume the subject. P. Q.

Lexington Dist., Dec., 1854.

REMARKS.—Many thanks, General. We have been looking for this communication now a long time, since we spent a pleasant evening together in your room in Columbia, and had a long, most agreeable, and to me interesting, conversation on this subject. We had almost come to the conclusion that you had forgotten your promise then made to give us an article for the benefit of the readers of the Farmer and Planter, as well as ourself. The subject is undoubtedly of sufficient interest to be resumed, and will be we trust, at your earliest convenience.—ED. F. & P.

A Preventive.—Many affections, such as bowel difficulties, cramp in the stomach, and the like occur in the night; and persons are often kept awake by an approaching diarrhœa, without knowing what is the matter till it comes on. Many of these afflictions may be obviated or prevented, by simply *lying upon the face*, when the pain or uneassiness occurs. The warmth of the bed, thus applied to the seat of the difficulty, in the same manner as heat appied in season to the seat of a cold, will completly dissipate it. A knowledge of the above fact has been of good benefit on a multitude of occasions to a person of our acquaintance.—*Prairie Farmer.*

Make the soil rich, pulverize it well, and it will be productive.

For the Farmer and Planter.

Mechanics.

MR. EDITOR:—A few days since, whilst sitting in the piazza of a tavern smoking a cigar, I heard two strangers conversing, and as they spoke audibly, it was no business of mine to shut my ears, or leave a pleasant seat. They spoke of persons in various towns of the west, and very particularly of a Mr. S. whom I knew, and one of whom declared he would have nothing to do with him, would not work for him; admitted he was a clever man, prompt pay, no fault with his management, &c.; but "he had darkies" working at the trade, the two followed. And thus is it among many mechanics, they abuse any mechanic who owns negroes and makes mechanics of them, and well may they. My near neighbor, Mr. N.. employed a man to put up three chimneys about twelve feet high, did the work in four days and charged $35. Painting a buggy over, and do perhaps a day's work of a hand in repairs, and it is so deep in a quarter of C, that you might deem it a total eclipse. Cementing a cistern, worth $15, my boy Frank who learnt the bniness on my cisterns, can do the work in three to five days, and with a little more practice can drop a day. I believe in a "division of. labor,"—"live and let live," but when it comes to making me crack the walnut, and giving me the covering, whilst the kernel is eaten by another, just then I am not there. If our rail roads would buy their own laborers and learn them trades, we would get rid of hoards of disaipated men, who corrupt our negroes, and too often buried by the public. I love mechanics of the right sort, they are the right hand of the planter, but we need not have the evil, which especially curses much of the country about towns and thoroughfares. I believe I would as soon have the "Coolies." give us laborers and citizens, who are sober, steady and honest, and deliver us from those who place themselves up as conscience keepers.

Yours, &c., M.

For the Farmer and Planter

A Word or two in General.

MR. EDITOR:—December is at hand, and the last number of the Farmer and Planter, Vol. 5, reminds me that I must again send up my dollar for the uninterrupted pleasure of perusing its columns for another year. I say *uninterrupted*, for I cannot read a paper for which I am in arrears without some vague and unpleasant sensations, as if I were in a sheep-fold or ought to be there. Now while my pen is in hand I will jot down a few remarks which you can publish in the Farmer and Planter, if you think them worthy the room, if not heave them away with the rubbish, and all will be right.

POOR TEAMS.—It is a matter of surprise to some people, how a good average crop can be well cultivated and then the mules (or horses) be in fine condition at the close of the season. Let them try the following plan: Always give your mules time to eat heartily every morning before taking them to the plow. At feed time and at night. see that they be *well curried* and *rubbed dry*. Salt them at least twice per week. Give them just a sufficiency an no more to eat. Never permit negsoes to ride them hunting cows and hogs. Try this plan; and my word for it, you will have an effectual team during and after crop season.

CUTTING TIMBER:—Some subscriber wishes to know when to cut timber, very likely if he observes much longer he will come to my conclusion, viz: It is the quality of the timber itself and not the season in which it is cut, upon which depends its durability.(*a*) Speaking of timber, I should like for Broomsedge to meet with a knowing one "of these parts," who turns all his posts heels upwards, and always makes desperate, but to me inexplicable, attempts to "explain the philosophy of."(*b*) I should have been much obliged to Broomsedge had he written that chapter on meat some months earlier, as I lost near five hundred pounds of bacon during the past summer.

SEED CORN.—Shortly after your publication of that butt-end-of-the-cob-experiment, I related to an experienced planter from Mississippi, who was looking over my crop, the experiment, when he told me that such had been his practice for several years. "A few days since," said he, "I was sitting on the fence and one of my neighbors rode up, he looked at the corn and wished to know if I did not have some peculiar kind of corn, as the shoots were so abundant." If life and health lasts I shall try the experiment another year.

GRASSES.—Enclosed I send you a few grass seed.(*c*) The grass grows finely here, two feet high on the hills, and nearly four in the bottoms; is loaded with fodder like millet, makes remarkably fine hay, and cattle, horses and mules are very fond of it. It dies about the first of October, root and branch, drops its seed very fast most of them are off by the plants death. I cannot speak of it botanically, although a regularly made M. D. I have such an unconquerable aversion to a class known in this country as "steamers," that I could never bring myself to

study "roots and yarbs" as much as I should have done, and I have a lurking suspicion that a black ball was counted aginst me when I "came forward" to the Grea Room. As you see the seed are large. Possibly it may be allied to the Rescue—Quien sabe? (who knows?) as the Spaniards say,

Selecting Cotton Seed.—If any man thinks he will not get paid for his trouble of going before his hands and filling his own sack from the choice stalks of the field, he is "mightily mistaken." Some of my neighbors acknowledge the superiority in my own field but "hav'nt time" to select them, and "believe the seed are all of the same sort any how," &c., &c.

Yours, truly, Woodlands.

(a) Our observations have brought us to a different conclusion from that of our correspondent, and that is, that timber cut in the summer, be the quality what it may, will be more tough and durable than that cut in the winter.

(b) Be the philosophy what it may, we have as few doubts of the propriety of turning a post "heels upwards" in order to pro long its durability as we have of the advantage of cutting timber in the summer for the same object.

(c) Much obliged for the grass seed. Though you have not given us the proper time for sowing, we will put them in the ground early in February, and report progress. They differ much in appearance from the "Rescue" seed.—Ed. F. & P.

Salt Your Corn.—Put six bushels of common salt upon an acre of land prepared for corn, and you will just pickle the wire worms to death, and add fertility to the soil. Salt, after having laid a few days in the groud ceases to be salt, but undergoes a chemical change highly favorable to vegetation. There is no danger in planting, after the salt has undergone this change. Not only will salt applied to land kill the eggs and larvæ of insects, but will kill many sorts of weeds that would otherwise spring forth and choke the crop.—*Carolina Watchman.*

For the Farmer and Planter.

Gathering Seed Corn from the Field.

Mr. Editor:—My exprience is this—I cut the stalks that had two years of corn on them. I hauled them to where I wanted to shuck my corn, and then sorted the corn over, taking the best ears for seed. They were then laid away until planting time. My corn become so that I could scarcely get an ear that was fit for seed—the grain become loose on the cob, and the ears small. It is a good deal like planting corn too thick; our common thin land cannot bring two good ear unless stimulated by manures to do it. I think it a good deal like taking off two ewes one with one lamb and the other with two: The former will raise a fine looking lamb while the latter will raise little runts of lambs, giving both the ewes the same kind and quantity of feed.

I have given you the truth and nothing else, if all who give their experience would do the same we would not have so much humbuggery. Those that dont believe as I do are at liberty to try the experiment.

Please give through the Farmer and Planter your success with the Rescue Grass on our poor southern land. J. W. L.

Remarks:—Having sown our Resene Grass seed late in consequence of the drought, and not in a favorable soil at that, the prospect is not very flattering up to this time. We hope, however, to be able to report more favorable in our March or April number.—Ed. F. & P.

For the Farmer and Planter.

The Past Year.

Mr. Editor:—Heretofore I have imposed upon myself the task, when I send up my annual subscription, of contributing something for your columns. Not having any particular subject to write upon, I will indulge in a few reflections upon the past year. It has been pithily said, "it is wise to talk with our past hours." A writer in the "Home Gazette," remarking upon the year 1854 says: "The heart sickens at the vast amount of suffering which has been experienced by all classes in almost every clime since the rising of the sun upon the first day of January last. Disaster has been heaped upon disaster, until the eye becomes wearied in the perusal of the long catalogue presented for our consideration." It is not my design to notice the "wars and rumors of wars," the plague, the pestilence, the storms, the shipwrecks, &c., that have so signally marked the eventful year which has just closed. It would take a volume to do this. My design is simply to remark upon it as it has affected the interests of the farmer and planter. They make the basis on which the whole structure of Society rests, and when they suffer all other classes must suffer, more or less. There can be no prosperous country, where Agriculture does not prosper. And how has it affected the interests of the farmer? Has it filled his garners, has it filled his purse, has it paid his debts? These questions almost excite what the doctors call the "sardonic laugh." The drought—a long and all pervading dronght—has blasted his hopes, throughout the borders of the whole United States—no State has escaped—all have suffered together, more or less. Every body wants provisions and provisions are high. The banks

have contracted and money is scarce, and cotton—*cotton is low!* a mere drug!! A money pressure—a panic prevails over the whole country. Such is a miniature picture. It is a sad reality, and no fancy sketch—indeed "the half is not told." But there is no need to tell—every one is sensible of the "hardness of the times." But is there no remedy for this wide-spread disorder—"this consumption of the purse?"—Some propose that Congress should mediate between the belligerants of Europe and bring about a peace. This would be a slow remedy, and would doubtless, in time, bring some relief; but can we by mediation restore peace? Some are for making the banks by law cease to deal in domestic exchanges, and thus to force them to discount more freely at home. This remedy, *if it is a remedy*, would be too slow to meet the exigences of the case. The case is urgent and demands immediate relief. Some propose that the banks should advance liberally on produce. This would respite the disease, and if cotton should rise before the advance became due, would be a real relief to many; but if cotton should not rise, would only protract and perhaps ultimately only exasperate the crisis. It would be simply "putting off the evil day." To be frank, then, I can see no remedy, except the slow workings of Time "that sorts all things." This is a painful admission, and the reader, perhaps, wonders for what purpose I have written the above—why I should have probed a wound I can not cure. It is an old proverb that an ounce of prevention is worth a pound of cure—and it is in the hope of preventing future evils that I have called his attention to the past and present. It may be often truly said in temporal as well as spiritual things, that "it is good for us that we have been afflicted." Let us see then, if we can, how the present pressure has been brought about. If we can understand this it may help us to extricate ourselves now, and prevent its recurrence in future. It is not true then that the present pressure has been brought about, mainly by the war in Europe—nor by the banks not circulating more money at home, nor in fact by the banks contracting their issues, as they have been compelled to do lately.—These undoubtedly precipitated *a pressure that was coming*, and even aggravated it; but they did not produce it. In the chain of causes, these belong to what the doctors call proximate causes—not the remote, the real cause. A main one of the real causes has been our trading—going in debt beyond our means of payment, and its usual attendant extravigances. Money pressures rarely hurt those who are not in debt. "I have discovered the Philosopher's stone," said John Randolph in one of his speeches, "it lies in these words—PAY AS YOU GO." To one who does this, bank contractions, or money pressures, high and low prices—in a word, hard times do little or no harm—they pass him by unscathed. And even unpropituous seasons—droughts—bear comparatively light upon him. It will generally be found that such a man has laid up something for a rainy day, and by a little more care and economy comes safely through. To such an one the fall in the price of cotton, is only an imaginary evil; and as for the most part most things fall in proportion, in that case no evil at all. Let us learn these things from the past and present—from the trials of 1854, and our troubles will prove to have been blessings in disguise.

Before we part, kind reader, let me insist upon one other view. Many of you plant too much cotton, and depend on that to buy provisions, instead of raising all your provisions upon your own farm. This is also one of the causes of the present pressure. Cotton is very low and provisions very dear. Bad as this is it is not the only bad effect that grows out of the practice. By this practice you increase the amount of cotton produced and lessen its price. Two-thirds of the cotton raised last year would no doubt bring as much money as the whole, that is if it were understood to be so, when the crop began to come in. The labor that made the one-third overplus, spent in raising corn, pork, &c., would have prevented the present scarcity, and not only that, would have lowered the price of pork and mules. This, it seems to me, is a clear case, and yet some infatuation seems to possess our planters, for even if they see it and belive it, they do not act upon it. Each one seems to think his individual example will not weigh in so large a scale. This I believe is a falicy; but whether it is or not—whether he can influence others or not—it will be the best course for him as an individual.

I conclude with the hope, that the year 1855 may be more propituous to the farmer than the one which has just closed, and that you Mr. Editor, will be cheered on by an increased list of patrons, which I think you richly deserve. Yours, &c. LAURENS.

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Many thanks, friend "LAURENS," for your yearly contribution, and many more if we could have one monthly, instead of yearly. We most cordially, join in the "hope" expressed at the close of your article, both as regards the year '55, and ourself, but at the

same time assure you, that if the year proves to be no more "propinuous to the farmer," than present prospects indicate in our favor, as regards an increased patronage, he may surely look out for a famine in the land, and prepare to pull up stakes and be off to California.—ED. F. & P.

For the Farmer and Planter.

Oregon Pea.

MR. EDITOR:—A subscriber to your paper informed me a few days since, that you would not have any objections to publishing any facts in relation to farming, and that you would not hesitate to answer or give your opinion on any subject relative to agriculture. Believing my informant is not mistaken in his statement to me, I have taken the privilege of offering a few facts for your paper; you can lay them before your readers. As I am nothing more than an old clod hopper, you will have to make all due allowance for any imperfections that you may find in my statements. I came to the conclusion a long time ago, and have no reason to change my opinion that facts were worth considerably more to a farmer than theory.

I beg leave to offer in the first place, a remark on the growth and valuble use of the "Oregon Pea." I planted last spring, about three pints; about one half of them came up. As soon as they began to ripen, I commenced picking, and continued the operation of picking until about two weeks before frost, at which time I cut the vines to make food for cattle. I picked between six and seven bushels of nice, clean peas, and had I let them remain two weeks longer, I could have saved several bushels more. I give the vines in their green state, to the horses, mules, cattle and hogs—each eat of the vine with the greatest fondness. With the cured vines I have fed four work oxen for the last 5 weeks; they have been constantly at work, and have kept in fine order on the pea-hay without any other provender. I do not tell you this with the expectation of selling the peas. I have no more of them than I can give to my friends and plant. I understand you have some acquantance with the pea; if so, I hope you will not refuse to answer the following questions. Will it answer any good purpose to plant a row of the Oregon Pea, and one of corn; the Peas to be drilled tolerably thick, and in the fall just before frost, gather what peas may be required for seed and the corn, then run a deep furrow and put the pea vines and corn stalks in the furrow, cover them up, and the next year open the ridge and plant corn and the peas between the corn rows, and serve the vines and stalks in the same way. It strikes me that ground might be made rich in this way; but before I try it, I should like to have your opinion. I have often seen fine wheat made by sowing one gallon or more of the common cow pea to the acre, the last plowing of corn. How will it do to substitute the Oregon Pea for the common cow pea, and use them in the same way. At some future day I will give you my experience in making hay.

AN OLD CLOD HOPPER.

ANSWER BY THE EDITOR.—To the first part of your communication, friend "CLOD HOPPER," we would remark that you have been correctly informed by our subscriber. We not only have no objections to publishing agricultural facts, but do so with much pleasure when furnished us by our correspondents. And so also in regard to giving our opinion or advice when asked for the same by our subscribers.

To your question regarding the planting of corn and the Oregon Pea in alternate rows, and burying the stalks of both to form a bed for the next corn crop, we unhesitatingly answer that we have scarcely any doubt of your increasing your crop yearly by such operation. If, however, we are mistaken in our views respecting the ultimate result of such course pursued for a series of years, the *cause* of the failure might, we think, be attributed to the continued cultivation of the land in the same crops. If after the second crop, the land was sown in small grain, and then given one years rest, and not pastured after the field had been gleaned by the hogs, the improvement would probably be more rapid if not more certain.

To your second question, we think favorably of substituting the Oregon Pea for the cow pea, preparatory to a wheat crop after corn, because the former stands a drought better than the latter, which when sown at the last plowing of the corn, is not unfrequently cut off or very inferior from that cause.

We shall be pleased to have An Old Clod Hopper's experience in hay making, as it is yearly becoming more important to the South.—ED. F. & P.

Rust in Cotton.

A subscriber at Beaufort, writes us as below. Will some one or more of our subscribers who have had any experience in the "Blue Rust," which, we presume, is only found in the low country, inform us as to cause and cure? Also of the "Red Rust?" This we have in the up country occasionally, and we have concluded it to be owing to the presence of too much iron in the soil. We have noticed that red sowerwood land, even spots in the same field where this had been the principal growth, was more subject to "rust" than any other part of the field. If then we are not mistaken in the cause being a predominance of *acid* in the soil, lime or ashes is the remedy. Land in which an undue proportion of iron prevails, may, by the application of lime, be rendered not only neutral, but by the chemical action of the acid on the lime, it will be changed from a carbonate to a sulphate of lime, (Plas-

ter of Paris,) and for some crops a superior manure.—Ed. F. & P.

"Mr. Editor:—The following questions I submit to you for information: The "*Blue Rust*" in cotton, or what is more commonly understood by planters, as the blue rust? The same respecting "Red Rust" in cotton. What are the most effectual remedies necessary to counteract the injurious effects upon cotton of iron ore in the soil? Please call for the requisite information from your numerous able correspondents, provided you are unable to give it yourself, and much oblige, yours, &c.

S. A. S.

New Subscribers---Grass Hoppers, &c.

One, truly a friend to the cause, writes us as will be seen below. We suppress all but initials, as the letter was not written for publication. Yet we take the liberty to publish it in order to show others what can be done in the way of getting subscribers, and that with but little exertion. Why can't others do likewise. We are also induced to publish in order to call out any of our subscribers who may be posted up in the business of destroying Grass Hoppers. A good flock of turkeys have proved the most efficient remedy with us; but in a patch of young turnips, the remedy would be as bad as the disease, unless they might prefer the Grass Hopper to the turnip.—Ed. F. & P.

Mr. Editor—*Dear Sir:* Farming is so incompatible with the duties of my profession that I give it but little attention. I have, however, taken the liberty of suggesting to some of my agricultural friends, the propriety of their taking the Farmer and Planter; the result of which is, I have the pleasure of sending you the names of *eight new* subscribers—I append the list. Also please change the name of F. R. (an old subscriber,) to J. A. For the above and my own subscription, I enclose $10.

My place is so infested with Grass Hoppers, that I can seldom get a stand of turnips. This year I have sown one acre twice, and it was twice destroyed by them, and I am now without that excellent vegetable. A few years since, they eat up about four acres of rye, which I had sown early for pasture in winter. If you know an efficient remedy for them, please inform me, and you will greatly oblige,

Yours, truly, J. Q.

For the Farmer and Planter.

To Eradicate Sassafras.

A neighbor of mine had thirty or forty acres of level, river land, formerly cleared and cultivated by the Cherokee Indians. The soil was much impaired, and was thickly grown over with sassafras. My neighbor used barn yard manure freely on this land, and in one or two years the sassafras was all entirely killed, and his land made rich by the manure, and he then made from forty to fifty bushels corn per acre. I believe barn yard manure the best article to restore land to its productive qualities, and eradicate from it its growth of sterility.

J. M. S.

Rich Bride Cake.—Take four pounds of sifted flour, four pounds of sweet fresh butter, beaten to a cream, and two pounds of white powdered sugar; take six eggs for each pound of flour, an ounce of ground mace or nutmegs, and a tablespoonful of lemon extract or orange-flower water.

Wash through several waters, and pick clean from grit, four pounds of currants, and spread them on a folded cloth to dry, and cut in two pounds of raisins, cut two pounds of citron in slips, and chop or slice one pound blanched almonds.

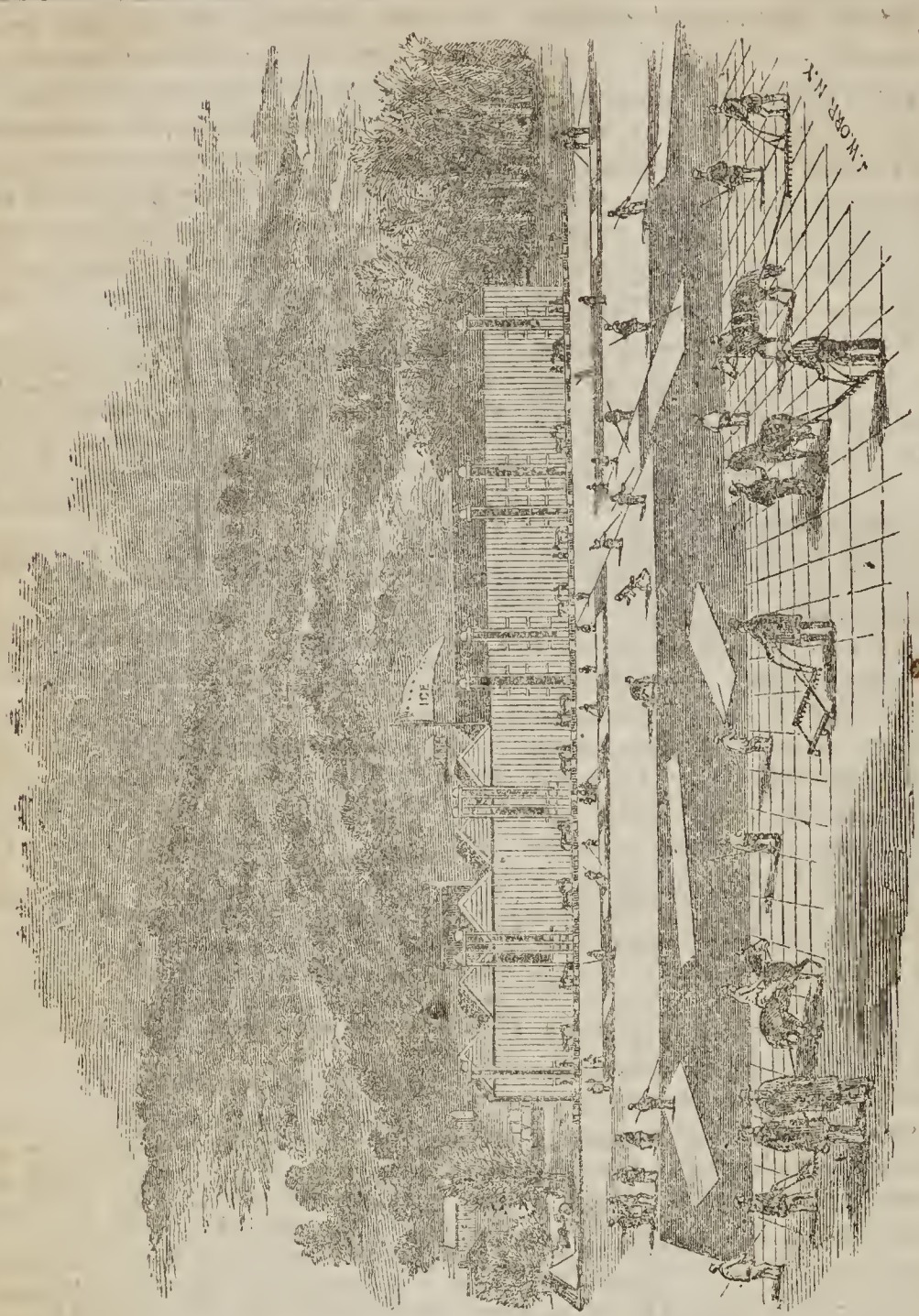
Beat the yolks of the eggs with the sugar to a smooth paste; beat the butter and flour together, then spice, and add them to the yolks and sugar; then add the spice and a half pint of brandy, and the white of the eggs beaten to a froth; stir altogether for some time strew a half pound of flour over the fruit, mix it through, then by degrees stir it into the cake.

Butter large tin basins, line them with white paper, and put in the mixture two inches deep, and bake in a moderate oven two hours. The fruit should be prpared the day before making the cake.

Draining.—All the rain that falls upon our fields must either by carried away be natural or atificial drainage, or, having thoroughly saturated the soil on which it falls, be left upon the surface to be carried off by evaporation. Now every gallon of water thus carried off by evaporation, requires as much heat as would raise five and a half gallons from the freezing to the boiling point. Without going to extreme cases, the great effect of the heat thus lost upon vegetation cannot fail to be strking, and I have frequent found the soil of a field well drained higher in temperature, from 10 to 15 degrees, than that of another field which had not been draned, though in every other respect the soils were similar. I have observed the effects of this on the growing crop; and I have not only seen a much inferior crop on the uddrained field, but that crop harvested fully three weeks after the other; and at the setting in of unsettled weather, I have seen that crop deteriorated fully 10 per cent in value.—*Journal N. Y. Ag. Society.*

Cows well fed in winter give more milk than in summer. An ox that is in good condition in the spring will perform more labor and stand the heat of summer much better than one that is poor.

When you see the fence down, put it up—if it remains until to-morrow the cattle may get over.



ICE CUTTING AT ROCKLAND LAKE, NEAR NEW YORK.

Above we give a representation of Ice cutting on a large scale, at the North, for the use of cities and shipment. It is said that forty men and twelve horses, will cut and store away four hundred tons in a day.

Tenacity of Life in a Fowl.—A correspondent residing near Yonkers, Westchester county, communicates the following remarkable fact which our readers may rely upon as correct. During a heavy snow storm in March last, he missed one of his hens and after looking in vain for her, gave her up as lost. On the thirty fourth day after the occurrence his atention was attracted by a slight scratching noise inside a wooden spout which conducted the outer air to his furnance in the cellar. and upon taking off one of the boards he found his hen inside —alive, but in so exhausted a state that he was unable to restore her, although she lived for three days longer.

She was a fine black hen, a cross between a Shanghai and Poland, about two years old.—During all these 34 days it was impossible she could have received any food or water, and there was a strong current of the coldest air constantly rushing past her.

Our correspondent regrets exceedingly. he cannot report her now alive, after such an effort to retain the vital principle. Has any one ever heard of such tenacity of life in a chicken?—*American Agriculturist.*

Hints to Farmers.

A bare pasture enriches not the soil, nor fattens the animal, nor increases the wealth of the owner.

One animal well fed is of more value than two poorly kept.

Ground once well plowed is better than thrice poorly.

Bountiful crops are more profitable than poor ones.

Weeds that grow unmolested around the fences, stumps and stones, scatter their seed over the farm and are very likely to grow.

What ought to be done to-day, do it; for to-morrow it may rain.

A rich soil will produce good crops without manure, but it will soon tire.

Damp Stables.

When I first came to the farm which I now hold by purchase; I found the stables built under large trees and near a spring of water, with a northern aspect. My horses were soon in poor condition, with long and rough coats, and almost always lax in their bowels, nor could I get them up by extra food or lighter work; but my cows suffered the most, for they were always sick. Their milk fell off and their butter was poor, and of a bad color and taste, and four of them slipped their calves before their time. When the spring came they left their winter quarters in a worse state than I had ever seen them, and two of them died from scours on going to pasture. On inquiry I found that the tenant who had left had always been what the neigbors termed unfortunate in his horses and cattle, and from that cause more than any other, he had not been able to make both ends meet. The truth flashed upon me in an instant, and in a very little longer time than it has taken me to tell my story, I had commenced pulling down the stable, the unhealthiness of which had been I was convinced, the cause of all the evil and the loss; and it was no more than two days before there was not left one stone upon another of the whole fabric. I now set to work and erected another on higher ground, removed from water, and clear from the shade of trees, with a southeast aspect, and dry capacious yard; and from that day I have had neither sickness nor sorrow in my out door household. My horses live on less food, are always sleek and in good condition, and my cows are a credit to their keep. Our butter brings 2 cents a pound more in the market, and for the last year our sales are more than doubled from the same number of cows and the same pasturage, and no more premature calves. Instead of watering my cattle as heretofore at the spring under the trees—the water cold, with a deadly taste and bad color—I sunk a well and put in a pump; and at a long trough in the yard for the summer, and another under shelter for the winter, my cattle slake their thirst without setting up their coats, as they used to do after drinking at the hole under the trees. Even when the weather was warm they were accustomed to shake all over as if they were in a fit of ague, after drinking their fill of this water; and to this, with the bad aspect of the stables, I attribute all the sickness and misery which I have experienced amongst my cattle and horses.—*Boston Cultivator.*

From the American Cotton Planter.

Blind Staggers.

DR. CLOUD—*Dear Sir*: There are so many things in the last number worth noting, that I am doubtful where to begin. But as I have opened at "Blind Staggers," I'll give my views on that dreadful malady. Last year I had a very valuable young mule suddenly taken with Blind Staggers. I bled her as long as she could stand; blistered between the ears; cut an X in her forehead about the curl; put in garlic and salt, and took a stitch on it; gave one ounce of ammonia (Hartshorn) with a pint of lard. The mule recovered, but was not able to do any work for some months.

It is an old saying, that "every body knows a cure for a sick horse;" and generally, in our ignorance and anxiety to cure, we try so many things, that it is next to impossible to tell what effected the cure. In this case, I am rather disposed to attribute the cure to the bleeding, although a writer in the *Southern Cultivator* asserts positively that the ammonia and lard will cure. It is evidently an inflammatory disease—a tendency to inflammation of the brain—and bleeding certainly would seem to be the most effectual. During the last year, a great many horses in my section died of Blind Staggers. It was attributed to their having been fed on corn which had been submerged by the August freshet, and become soured, but such was not my case, nor was it universal. I am satisfied that it is a species of epidemic. It is no uncommon thing for it to go through a whole neighborhood and kill every horse in it. Many persons have lost every horse they owned, in a neighborhood not far from me, this spring. "An ounce of preventative is worth a pound of cure," is a trite old saying with a good deal of truth in it. After my mule's attack last spring, I bled every horse and mule on the plantation two gallons, measured—(never bleed without a measure—*stick a pin there*)—then gave a table spoonful of salt-petre, and a few days afterwards one-quarter pound sulphur to each, mixed in a little bran. In addition to this, I always give salt and ashes, or salt and lime once a week to my stock of all kinds. I have never lost but three horses; one from a kick, one from old age, and another from cholic; and I attributed much of my success to the salt and ashes. "The fatality among horses," described by Mr. Bibb in the same number, I have no doubt is of the Blind Stagger class. The symptoms are identical with cases known to me.

"Mulberries for Pigs!" I should like to have a few such trees as the one you speak of. How many blessings do we pass by the wayside unheeded? There are a great many varieties of Mulberries—all capable of being converted to profit. But there are more things beside Mulberries worthy of notice. What have you to say of the hundred varieties of Plums, and the Persimmons which would take the old fields, if let alone? What does a pig love more than a Plum or a Persimmon?

"QUILN SAGE?"

From the American Cotton Planter.

DR. CLOUD—*Dear Sir*: I see in your paper, the *Cotton Planter*, an inquiry about a cure for "Blind Staggers," and I will state my experience in the matter. On several occasions, I owned horses that were affected with Blind Staggers, and I have relieved them by the use of cold water, poured upon the head and even along the whole spine; and I never have failed but once to cure it. When you commence using cold water, you must not "*weary in well doing*," for it will require a great deal of pouring to cool the fever in the brain, for I believe it to be nothing else. I am not a horse doctor, but a farmer, and I have seen several cases cured in the above way. The North Alabamians, who have

abundantly stored ice-houses, would do well to put ice pounded and tied upon the head.

If you have any confidence in the remedy, you can use it.

Respectfully, J. R. B.

I cure colic by red pepper tea, 1 quart. and half a teacup of lard, mixed, given warm.

Cooksville, Miss., March 21, 1854.

From the American Cotton Planter.

DR. CLOUD—*Dear Sir*: Blind Staggers in horses, from my observation for many years, has been invariably produced by feeding on damaged provisions. The same cause produces billious fever and yellow fever in the west and south-west. The same treatment will cure both man and beast. I prescribe Quinine one part, Dover's Powder and Pulvis Antimonialis one half, according to age and constitution. Nineteen years since I had a horse with "blind staggers." I saw him attacked with a regular ague and subsequent fever. I gave him a mass composed as Cook's Pills; the horse died with purging. I would now give the above recipe, as I know it will invariably cure billious fever, by giving a dose every three hours.

Yours, &c., ED. J. FELDER.

Dean Swamp, March. 27, 1854.

Cleanliness.

It is, however, in an *economical* point of view, that our present remarks are chiefly intended. We have heard of farmers dissuaded from cultivating neatness, as something unnecessary, and urged to devote all their time to such labor as will yield immediate profit. Instead of being embellished with shrubs and shade tress, their door-yards must be marked with ruts of loaded carts; soap must be economized on wearing apparel, and scrub-brooms on the dairy and kitchen floor. Now, we hope none of our readers will ever listen to such advice for a moment. We do not believe a word of it. We have had occasion to visit, both privately and officially, many of the best farms in the country,—those which have proved pre-eminent for their heavy profits by good management,—and without a single exception, they were specimens of neatness throughout. The door-yards were not covered with chips, barrel hoops, cast off shoes, or puddles of dish water; the barn yard was not reeking with the fumes of manure heaps wasting through summer in the hot sun; nor were the fences lined with thistles, briers, and burdocks; but every part showed the complete control which was exercised by the touch of a master, not only in raising large crops, but in keeping out all intruders, whether animals, weeds, or refuse matter. The same energy which preserved a neat ornamental lawn, kept in motion the clock work of an excellent management.

A celebrated sculptor, when reproached by a friend for having made no progress in his work, pointed to the statute, and said, "You mistake; I have not been idle; I have re-touched this part and polished that; I have softened this feature, and brought out that muscle; I have given expression to that lip, and more energy to this limb." "Well, well," said his friend, "these are but trifles." "True," replied the sculptor, "but trifles make perfection, and perfection is no trifle!" This is a truth for all time—for all circumstances—and eminently applicable to the occupation for farming, made up, as it is, of almost innumerable operations. Perfection in farming can never be reached while neatness and cleanliness are left out, and for many things they are perfectly indispensible. The manufacture of butter, for example, is conducted very much in the same manner everywhere; but what is the reason that full 20 per cent. difference is made in some markets in the produce of contiguous dairies? Is it the breed of cattle that occasions the difference—or the food—of the soil? No—although these may have their influence, the great leading cause is the perfect cleanliness which the skilful butter maker maintains in every part of the operation—in all her vessels—in her milk room—in the cattle yard—not even permittin g the entrance of offensive odors. The cost of the labor expended annually in butter making throughout the country can be only estimated by millions, one tenth at least of the whole value of which is lost by a want of this great requisite—enough, in the aggregate, to buy a thousand beautiful farms yearly. Is not this a pretty large "trifle?"

All animals thrive better when kept clean. A want of comfort is always a waste of flesh. Large amounts of food are yearly expended, in restoring what is lost by the discomfort of uncleaned floors, unventilated stables, by uncurried cows and horses, by unlittered pig-styes; and continued losses are occurring by subjecting breeding animals to offensive odors. We have no doubt that a thorough reform in farm management in the single point of cleanliness, through all departments, would build an Erie Railroad or dig an enlarged Erie Canal every year. As for the profits on the score of health, derived by farmers and their families, from personal ablutions, thorough cleanliness in all the preparations of food, and freedom from all miasms from kitchen puddles, foul cellars, and all kindred sources of polluted lung-food,—they cannot be measured by bank-notes, and bullion, although the diseases thus occasioned often consume the last vestige of both.—*Country Gentleman.*

For the Farmer and Planter.

Economy in Tools---"A Place for Everything, and Everything in its Place."

MR. EDITOR—The commencement of a new year invariably puts us to studying. The wear and tear of plantation tools is harrassing to every planter who does not have a good mechanic at his nod and beck every day in the year. Our plows are broken, our hoes are lost, our harness need repairing, and large demands are made on the blacksmith, the carpenter, the tanner and the harness-maker. A conveniently arranged tool-house is an indispensible fixture to good economy. I have never seen one, but allow me to picture such an one as I have always desired. A place with sufficient room, securely enclosed and under lock and key, where everything has a place, should be provided, and then everything should be kept in its place. System and order in large operations can only be controlled by similar principles exerted *e radice*. Let there be a place for the hatchet, the saw, the augers, the chisels, the square, the compass, the hammer and the planes. These are the planters' radical tools. Let him have his timbers, for plows, harrows, hoe and axe handles, all properly prepered, seasoned and laid in their proper places. His bolts, plow irons, nails, &c., each laid on a separate shelf, and above all, let him have all the parts of a plow ready finished up, so that in two minutes he can insert a beam, put on a handle, or add a singletree, should either be broken whilst at work. This practice will save hundreds of lost hours, usually spent in hands returning from the fields, when such small accidents happen, and waiting till the injured implement can be hastily and bunglingly mended. When the laborer is done with his tools, he should not consider the job finished until he had returned it to the proper place. How often do we see hours spent—hours of needless vexation too—when we wish to do a job different from the regular work—in hunting up the tools which we require? Where is the planter who can tell you the exact location of his shovels, spades, dung forks, or carpenters' tools? If such there be, when he reads this enquiry, let him speak, or straightway teach others to follow his noble example. The readers of the Planter know well enough what we are driving at, and we propose to add a few suggestions as to tools not commonly in use, but which we regard as very necessary to economical farm operations. As this is the season for piling compost manures made in our stock yards during the winter, allow me to recommend the cast iron road scraper, with a single mule for the purpose of expeditions and thorough worth. We use one in our lots and the piling of composts is with us an easy job. One boy and mule can pile as much manure as ten hands with good shovels and forks, and then two, if we have different materials which we wish to intimately intermingle, nothing is easier than to do so effectually with the scraper, as all we have to do is to drive successively to the different quarters and scoop it up. We have found this implement of great service in levelling ditch banks thrown up, which from the great amount of clay are generally unproductive, but which clay is of great value when incorporated with the arable soil. Good dung forks with not less than six tines, and made in the best manner, cut out of a solid plate of cast steel, will expedite loading manures vastly, and then with a properly constructed dumping cart, the planter can go to work with satisfaction and profit. To work without the proper tools, is toilsome labor; to have everything to our hands and good implements, makes labor pleasant to the industrious man.

ERADICATOR.

Stoney Lonesome, February, 1855.

Nicholas Longworth, the famous millionaire and wine-grower of Cincinnati, publishes the following cure for scrofula:

Put 2 oz. aquafortis on a plate, on which you have two copper cents. Let it remain from 18 to 24 hours. Then add 4 oz of clear, strong vinegar. Put cents and all in a large mouthed bottle, and keep it corked. Begin by putting 4 drops in a teaspoonful of rain water, and apply it to the sore. Make the application three times a day, with a soft hair pencil, or made of soft rags. If very painful, put more water. As the sore heals apply it weaker.

I request editors, in all parts of the Union, and abroad, to copy this, and to republish it quarterly—it may save many lives.

N. LONGWORTH.

Cincinnati, Ohio. Nov. 18. 1854.

P. S.—Capt. Harkness, of our city, the first person cured by this remedy, applied it without water, and he informed me that he thought it would burn his leg off; but the next day it was cured. His was a small sore, and had been attended to for months by one of the best physicians, without any benefit.

Lime Water in Bread.—E. C. Haserick, of Lake Village, N. H., writing to us, says that a pint of lime water added to the ferment for five lbs. of flour will neutralize all fermentation, and

color the wheat yellow. In Germany bread is baked for a family about once a fortnight, and two or three bushels of flour are mixed up at one time with yeast and left to stand over night, which by being left too long, or if it gets too hot, becomes acidulous or sourish. If lime water is then added, it does good service by neutralizing the excess of acid, and still leaves a sufficient quantity of carbonic acid gas to make the bread light. He believes that a little lime water is good for bread, as set forth by Liebig, but should not be added to the dough until it has risen.—*Scientific American.*

United States Agricultural Society.—The third annual meeting of the United States Agricultural Society will be held at Washington, D. C., on Wednesday, February 28, 1855.

Business of importance will come before the meeting. A new election of Officers is to be made in which it is desirable that every State and Territory should be represented.

Lectures and interesting Discussions are expected on subjects pertaining to the objects of the Association, by distinguished scientific and practical Agriculturalists.

The various Agricultural Societies of the country are respectfully requested to send delegates to this meeting; and all gentlemen who are interested in the welfare of American Agriculture, who would promote a more cordial spirit of intercourse between the different sections of our land, and who would elevate this most important pursuit to a position of greater usefulness and honor, are also invited to be present on this occasion.

MARSHALL P. WILDER, Pres.
W. S. KING, Sec'y.

Jan. 1855.

A teacher in a Sunday school was lecturing a class of little girls on the influence of pious instructions in the formation of youthful character. "Ah, Miss Caroline," said he to one of the class, "what do you think you would have been without your good father and pious mother?" "I suspope sir," answered Miss Caroline, "I should have been an orphan."

Camphene.—The Cleveland *Herald* says: "The disastrous fire in Lockport shows the doings of this murderous compound on a large scale. If the bodies of those who have met their death from camphene could be collected in one pile, such a hetacomb would blast the eyes of lookers-on as has not been collected by any of the thousand of death's agent which stalk through the land. The property destroyed by camphene would build and endow an Orphan Asylum in every county in the Union. Yet the people take it into their hands put it into the hands of their servants, and send their children to bed with camphene lamps."

Estimates

OF THE QUANTITIES OF GARDEN SEEDS REQUIRED TO PRODUCE A CERTAIN NUMBER OF PLANTS, OR TO PLANT A CERTAIN QUANTITY OF GROUND.

Asparagus—One ounce will produce about 1,000 plants, and require a seed bed of about twelve square feet.

Asparagus Roots—1,000 roots will plant a bed four feet wide and from 200 to 250 feet long, according to the distance apart the plants are placed on the row.

Beans—English Dwarf—One quart of seed will plant from 100 to 150 feet of row, according as the sorts may be early or late.

Beans—French Dwarf—One quart will be sufficient for about 350 hills, and the same quantity will plant from 250 to 300 feet of row.

Beans—Pole—One quart of Lima, White Dutch or Scarlet Runners will plant about 100 hills; of the smallest sort, one quart will plant about 300 hills, or 250 feet of row.

Beets—When sown as gardeners general sow it, it requires at the rate of ten pounds to an acre; one ounce will suffice for about 150 feet of row.

Brocoli—One ounce will produce from 2,500 to 3,000 plants, and require a seed bed of about forty square feet.

Brussels Sprouts—The same as Brocoli.

Cabbage.—Early sorts the same as Brocoli; the late and Savoy sorts will require a seed bed of about sixty square feet.

Cauliflower—The same as the later sorts of Cabbage.

Carrot—Three to four pounds are required to an acre, and one ounce will sow about 200 feet of row.

Celery—One ounce of seed will produce about 7,000 or 8,000 plants, and require a seed bed of about eighty square feet.

Cucumber—One ounce of seed will be required for about 150 hills.

Curled Cress—One ounce of seed will sow a bed containing sixteen square feet.

Egg Plant—One ounce, if properly managed in the seed bed, will produce from 2,500 to 3,500 plants.

Kale—The same as Brocoli.

Endive—One ounce will produce 3,500 plants, and require a seed bed of about eighty square feet.

Leek—One ounce produces about 2,000 or 2,500 plants, and requires about sixty square feet of seed bed.

Lettuce—One ounce will require a seed bed of about 120 square feet, and will produce 6,000 or 7,000 plants.

Melon—One ounce will be sufficient for about 120 hills.

Nasturtium.—One ounce will sow twenty-five feet of row.

Onion—From four to five pounds are required for an acre, when raised for the bulbs; one ounce will sow about 200 feet of row.

Okra—One ounce will sow about 200 feet of row.

Parsley—Six or seven pounds are required to the acre; one ounce will sow about 200 feet of row.

Parsnip—From five to six pounds are generally sown to the acre; one ounce will sow about 250 feet of row.

Peppers—One ounce will produce about 2-000 or 2,500 plants.

Peas—From one to two bushels are generally required to an acre; one quart of the smallest sorts will sow about 120 feet of row, and of the larger sorts one quart will sow about 200 feet of row.

Pumpkin—One quart of the common field sorts will plant from 500 to 600 hills, and, of the finer garden sorts, one ounce will plant about fifty hills.

Radish—From twelve to fourteen pounds of the early spring sorts are required to the acre, if sown broadcast; but half that quantity is sufficient if sown in drills. Of the later sorts five pounds to the acre, in drills, are sufficient. One ounce will sow about one hundred square feet.

Salsify—From five to six pounds are generally allowed to an acre. One ounce will sow about 150 feet of row.

Spinage—Cultivated in drills, from seven or eight pounds to the acre are sufficient; if sown broadcast, double that quantity. One ounce will sow about 200 feet of row.

Squash—One ounce will plant from fifty to eighty hills, according to the sorts and size.

Tomato—One ounce will produce about 2,-500 or 3,000 plants, and require a seed bed of about eighty square feet.

Turnip—From one to two pounds are generally allowed to an acre; one ounce will sow 2,000 square feet.

Water Melon—One ounce will plant from forty to fifty hills.

Bromuret of potassium is now used to produce insensibility, in the same way as chloroform is used.

The Farmer and Planter.

PENDLETON, S. C.

Vol. VI., No. 2, : : : : : February, 1855.

Answer to Correspondents.

J. M. D. of St. Matthews.—We are much obliged for your communication, in which you are pleased to express your good will. We regret that you did not know of the existance of such a paper in your own State as the Farmer and Planter, at an earlier date. From the sparse number of our subscribers, in old Orangeburg, we fear there are many such.—will our friends help us to reach them in some way?

The article you allude to, shall appear in an early number of the F. and P., and any thing you may please to write for our columns, will be thankfully received, for although we have not the pleasure of knowing you personally, we know from the fact of your personal attention to the important business of grading ditching your plantation, and other matters as we gather from your letter, that you are a practical man and one calculated to teach the craft in our art. We had the honor of an introduction to your son, O. M. D., in Columbia last winter.

J. Montgomery & Bro., Baltimore.—Your communication has been received, and shall be attended to. Our readers will please turn to the advertisement of the Messrs. Montgomery, who they will find by reference to the certificates of some of the most extensive and successful wheat growers of Virginia and Maryland, are the manufactures of *one* of the best, if not of the *very* best Wheat Fans now made in the United States. The Messrs M. have made some recent improvements on their fan and with a good supply of machines and best materials on hand, can promptly furnish all applicants. Price with the late improvements, $34.

Acknowledgments.

Our highly respected friend and subscriber, Col. F. Pickens, will please accept our thanks for a present, through the hands of our Senator, Col T. J. Pickens, of two quarts of the largest, whitest and most beautiful rye that we have ever beheld. Sometime in December past, we purchased a few grains of this variety of rye from a travelling man, who stated that his brother cultivated it successfully near Dahlonega, Ga. He called it wheat, but it is evidently to us, rye. Will Col. Pickens give us its history?

Our old schoolmate, "Charley" Terry, is also

entitled to thanks for some ears of fine looking corn, which we have carefully laid away for seed. It has the appearance of being a mixture of Baldwin and common white corn of the country. What is it called?

Mr. CHARLES A. PEABODY, of the "Soil of the South," will also accept our acknowledgments for a paper of the Orange Melon seed. We have been cultivating this, as we consider it *excellent* Melon, a few years, but have some how though guarding against it got them mixed with other varieties, and hence them which Mr. P. informs us are the "genuine seed," are the more acceptable. Mr. PEABODY says "it is not only a curiosity, but the most luscious melon I ever saw."

To the Hon. CHARLES C. MASON, of the Patent Office, we stand indebted for his polite attention in forwarding us from time to time, seeds of various kinds. Mr. MASON has also sent recently to the Farmers' Society of Pendleton, a valuable package of seeds for distribution, for which he has the acknowledgments and good will of the Society.

Such kind favors as the above, go "to prove that there are *roses* as well as *thorns* in editorial life," as our brethren of the Southern Agriculturist would say; and really on running over their list of acknowledgments for January, we came to the conclusion that they stood in no unenviable position in this respect.

Editors' Table.

Since our last we acknowledge our indebtedness for many favors:

To the Hon. J. J. EVANS, and Hon. J. L. ORR, for sundry valuable public documents.

To B. P. JOHNSON, the polite and indefatigable corresponding Secretary of the New York State Agricultural Society, for a handsomely bound volume of some 800 pages of the "Transactions" of the Societies, with an Abstract of the proceedings of the County Agricultural Societies, vol. 13, 1853. This is truly a valuable acquisition to our Agricultural Library.

AMERICAN RAILWAY GUIDE—To some unknown friend, for a copy of this, to all travellers, indispensable work. Containing a new and complete map of the Railway system of the United States and Canada, with some 200 pages of correct tables, for the time of starting from all stations, distances, fares, &c., on all the Railway lines in the United States. Published by DORISMON & Co, New York.

SOUTHERN MEDICAL AND SURGICAL JOURNAL—Nos. one and two of this most valuable work has been received. It is ably edited by L. A. DUGAS, M. D., Professor of Surgery in the Medical College of Georgia, and by HENRY ROSSIGNAL, M. D.; and is made up by contributions from the most eminent Physicians of the South and elsewhere. Published by JAMES McCAFFERTY, Augusta, Georgia; monthly, at $3.00 per annum.

JOURNAL OF AGRICULTURE—Edited by J. D. B. DeBow, and published in New Orleans and Washington City, monthly, at one dollar per annum. This is a new candidate for favor, and from the known talents of its Editor, will, no doubt, be elected. We with pleasure give it our vote.

EXCHANGES—Our usual large number of valuable exchanges have been received, both Agricultural and Political. To the polite editors of the latter especially, who have so kindly and favorably noticed our January number, we would make our most polite bow; with the expression of our grateful appreciation of their favors.

THE SOUTH CAROLINIAN—We are gratified to find this highly valued exchange once more on our table, "as large as life." After the recent sad calamity which has befallen the proprietors, great industry and a large expenditure has undoubtedly been necessary to enable the proprietors to resume their business in so short a time. They have the sympathies of the whole State, no doubt. May they have something more substantial. This is a case in which every man may, if he considers it as such, do a charitable act, and for which he will in one year be well paid, by at once sending up his name and subscription price for the Carolinian.

ECONOMY IN TOOLS," &c.—We call the attention of our readers to this communication, from our friend "Eradicator," which came to hand late for this number. Read it, and study it, and act accordingly. We hope it will not be the last we shall have the pleasure of laying before you, from the able pen of "Eradicator."

Errata.

In the article from "Broomsedge," headed "Southern Central Agricultural Society," on page 17, line 15th, from the first column, for "*fourth* best Suffolk Boar," read *for the* best Suffolk Boar. Col. SUMMERS Boar was *first* best, instead of "fourth" best. The mistake which was overlooked in reading proof, occurred by substituting "fourth" for the words *for the*, an error not *very* blamable in a typo, who was not *well* acquainted with the chirography of our friend Broomsedge.

Agricultural Convention.

We publish the letter from our esteemed correspondent, J. M. P., on the subject of calling a State Agricultural Convention, with great pleasure, and take this occasion to express our hearty approbation of his suggestion, and could we do aught to forward his purpose, we certainly would not hesitate to do so. We have long felt the importance of more active interest in the agricultural pursuits and education in our State, and we can conceive of no better mode of getting up a wholesome and salutary interest in the cause, than by holding a Convention of farmers and planters at some convenient time in Columbia; but would suggest instead of the 12th of July, the second Tuesday in December, at which time a more full and interesting meeting could be had than at any other time. Much of good might be done, and certainly no harm. If the people have a right, and if it is their duty to hold

political Conventions to discuss great political interests, which no one denies, why have they not the right, and why is it not their duty to hold Agricultural Conventions to discuss great agricultural questions There is no interest in our State of more vital importance to our well-being, prosperity and happiness, than that of her agricultural pursuits. Take for instance the simple consideration of passing *dog laws*, as suggested by our correspondent, how often have we heard the necessity of such a law complained of by all classes of the community; and yet no politician nor even Statesman has had the courage to propose it in the Legislature. A Convention of farmers and planters might do much to bring about an end so devoutly to be wished; but this is a small item in the catalogue of benefits which might be brought about by a proper interest in the agricultural affairs of our State, which can most effectually be brought about by a Convention.

It will be seen on reading the article of our friend referred to above, that it was not written for publication, he has, however, since writing it, yielded to our desire to publish, on condition that his name should not be given to the public, as he had no desire to be considered as the prime mover in the matter, but rather that *we* should take the initiary steps, with the assurance of his hearty co-operation. This we feel quite sure we shall have of every intelligent, thinking farmer and planter in the State, who has seen and felt the wrongs either by omission or commission, we as a class have been compelled to submit to by our politicians, some of whom are farmers and planters themselves, but who seem to forget on arriving at Columbia, that they are such, and most strangely neglect their own, and the paramount interest of the State, whilst sustaining all others.

We have suggested above, a different time for the meeting of the proposed Convention, but on reflection are not satisfied with the time fixed on, for more reasons than one: *First*, that it will be during the session of the Legislature—a time when there is a perfect squeeze in Columbia, even without the pressure of such a Convention as we desire to get up, and at a time when the Hotel-keepers take occasion, knowing the people are compelled to be there, to exact the most exorbitant charges for board, &c. And *secondly*, That it will be at a time of the meeting of politicians, which it may be *most* important to our Convention to avoid. These objections are, however, for others to think on: we merely throw them out after suggesting the second Tuesday in December, instead of July, which will be earlier, we fear, than will allow time for organizing and appointing delegates in the different Districts of the State. What say the friends of the cause? Speak out gentlemen, let us have your views *touching the whole matter*.

MR. EDITOR:—I have often thought why South Carolina was behind all her sister States in agricultural spirit and enterprise. Is it from a want of energy on the part of her people, or is it for the lack of concerted action? Truly she has the means and ability to do as much, at least, as North Carolina; and why may she not dare do as much as either Georgia or Virginia? The yeomanry of South Carolina desire an efficient *dog law*. Why can't they get it? They ought to have a State Agricultural Association. What prevents? An Agricultural Professorship in our College would be one means of disseminating information of importance to most of planters, and why can't we have one? But above all, in my opinion, they want and ought to have six Agricultural Chemists; call them Geologists, Mineralogists, or whatever name you please; but give us six competent men. One for each judicial District in our State: whose duty it shall be to locate himself at our Court Houses for two months in each year; thus visiting each District in the judicial Districts, and spending two months in the same, in the course of 12 months; delivering Lectures on Agricultural Chemistry; analizing soils, and instructing the planters in every thing appertaining to an improved system of husbandry and plantation economy. They want these not only for one, two, or three years, but for *all time*. Still they don't get them. Make your desires known to a *full blooded politician*, (and I am afraid our Legislature is composed of too many such,) and he will tell you, "they have not the means, and six competent men can't be found to instruct the people, and if they could, the people would not go out to hear them. As for the dog law, let me entreat you not to mention it, nor insist on our Representatives, making any move in your Halls of Legislation, if you desire to save his reputation." Well sirs, as regards means, is not our Treasury overflowing; at least the acts of the last session so speak. As regards competent men, just establish the office, attach to it a good paying salary, South Carolina has the *material*, and the Agricultural Chair in our College, will soon turn out the men, without a single importation from Yankeedom. The remedy for all our grievances, appears to me, to be easily come at, if we only make up our minds to act with unanimity, and in concert. I suggest (for your consideration,) the following plan: Addressing a circular to the Presidents of the District Agricultural Association, and in case there is no association or society in the District, to some of its most prominent farmers, (not politicians,), to call a meeting of their members or citizens. Said meeting to nominate or elect ten *delegates* to a *Farmers Convention*, to be held in Columbia, on the third Wednesday in July next; then and there to devise some means for the promotion, and encouragement of the Agricultural interest of South Carolina. The District meetings to be convened on the first Monday in May next. Give us concert of action, and we can do anything; without it, we can do nothing.

Mr. Editor, the above was not written for publication, but I should like to hear your views as regards the feasibility of the plan. If you think it practicable, and feel disposed to lend your aid and influence to the measure, or can get some of your able contributors to take hold of it, and keep the ball moving, I promise all my aid and support, small as it is, and farther promise for my District, ten good, substantial *farmers*, of the right grit, as delegates.

Mr. Editor after reading the foregoing, I have come to the conclusion that you will take me to be some visionary being, or wild enthusiast, or some run-mad progressive "*Young American*," and came near committing the whole to the flames; but a second thought said, "send it," and here you have it. Notice it or not, just as you please; no harm done, except a useless consumption of your time. I contemplate sending you before long, my mode of legislation, in the case of negro dogs, sheep killers or not, which I put in practice some eight years ago, and which has completely extirpated the breed in my section. If the proposed Farmers Convention effects nothing, as contemplated, might it not be a nucleus upon which to form a State Agricultural Association.

Yours, very respectfully, J. M. P.

CONTENTS OF THIS NUMBER.

LIST OF PAYMENTS RECEIVED.

NAMES	POST OFFICES.		AM'T.
Wm. Parris,	Coghill,	Tenn.	1.
Dr. G. O. Buntyn,	Memphis,	"	1.
T. C. Hindman,	Ripley,	Miss.	1.
J. T Camp,	Hicksville,	N. C.	1.
Dr. L B Minn,	Palmyra,	Ga.	1.
V M Barnes,	Winfield,	"	1.
N. W. Stone,	Raytown,	"	1.
R W. Brown,	Gainesville,	"	1.
C. G. Webb,	Silver Glade,	S. C.	1.
W Duckworth	"	"	1.
Maj. R. S. Griffin,	Clinton,	"	1.
P Glenn	Maybinton,	"	1.
Dr Wm Robinson,	Sabtown,	"	1.
S A Sams,	Beaufort,	"	1.
M B Sams,	(vol. 5)	"	1.
L R Sams,	(vol. 5)	"	1.
Capt. J E Fultz,	Black Oak,	"	1.
J W Baker,	Cedar Falls,	"	1.
Jos. Quattlebaum Esq.,	Poplar, ('54-5)	"	10.
W J Bookhardt,		"	
D S Livingston,		"	
Felix Rush,	('54)	"	
Jacob M Dantzler,	St. Matthews,	"	
Dr J C M Holman,		"	
Sam'l Sellers,		"	
Benj. Cummings,		"	
Jas A Dantzler,	McCantsville,	"	
M R Livingston,	Friendship,	"	
Col. W A Hayne,	Pendleton,	"	2.
P J Miller,	Claremont,	"	1.
E J. Pugh,	Privateer,	"	1.
Mrs. M E Miller,	"	"	1.
J. J. Giddens,	"	"	1.
Dr C H Richardson,	Privateer,	"	1.

We have a large number more on hand, which we are compelled to leave out, but they shall appear in our next number.

NOTICE.

I WISH to call the attention of the public to the valuable improvement of Formand and Garlington's Patent Plow Stock, made altogether of Iron. It far surpasses any other kind now in use. I have purchased the right for Anderson District, and will sell the right to make by the piece, or shop-rights, or will furnish stocks ready made. Any person wishing to see them can do so by calling at my shop at Pendleton. JAMES HUNTER.

Pendleton January 13. [2—tf]

THE AMERICAN PICK,

FOURTH VOLUME.

THIS Illustrated comic weekly, published in the city of New York, every Saturday is about to commence its fourth year. It has become a favorite paper throughout the United States. Besides its designs, by the first artists, it contains witty editorials of character, and will carry cheerfulness to the gloomiest fireside. Its variety renders it a favorite in every family.

It contains each week, a large quantity of tales, stories, anecdotes, scenes and witticisms. The "Recollections of John C. Calhoun, by his Private Secretary," will be continued in the Pick until finished, and then a copy will be sent free to every subscriber whose name shall be upon our mail book. Each yearly subscriber to the Pick will receive the double sized Pictorial sheets for the Fourth July and Christmas, without charge. Each of these Pictorial sheets contains over 200 splendid designs.

The subscription price to the Pick is $1, cash in advance. Six copies $5. Thirteen copies for $10.

Letters must be addressed to

JOSEPH A. SCOVILLE,

No. 26 Ann Street,

Feb. 1t.) New York.